UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,358	08/29/2001	Thomas Austin Fields	2000-0269.02	9720

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EXAMINER
MOUTTET, BLAISE L

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _29 August 2001_ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-22_ is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-22_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _29 August 2001_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

  If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a) ☐ All b) ☐ Some * c) ☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

  a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _2_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1.   The applicant has presented claims drawn toward an ink jet printer and a method

of storing usage information in an ink jet printer however no ink jet element is claimed. It

is clear, when read in light of the specification, that applicant's claimed intent is to define

an inkjet printer and method of storing usage information in an ink jet printer and not just

a memory element or a method of storing usage information. However the form of the

claims may be more properly presented by including a limitation drawn to an ink jet

element in order to avoid the interpretation that the ink jet features of the preamble are

simply associated with intended use. See MPEP 2111.02 and particularly *Catalina*

Mktg. Int'l V. Coolsavings.com, Inc., 62 USPQ2d 1781 (Fed, Cir. 2002) for further

details on this point.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-4, 6, 10-13, 16, 17, 19, 20 and 22 are rejected under 35 U.S.C. 102(b)

as being anticipated by Okamoto US 6,002,846.

Okamoto discloses, regarding claim 1, a method of storing usage information in

an ink jet printer (figure 1), said method comprising the steps of:

storing low priority usage information (information not considered catastrophic if corrupted) in a first memory field (AREA 1) (column 7, lines 4-25);

storing first high priority usage information (information considered catastrophic if corrupted) in a second memory field (AREA 2) (column 6, lines 32-49); and

storing second high priority usage information in a third memory field (WORK 2), said second high priority usage information being substantially identical (a copy as taught by Okamoto) to said first high priority usage information (column 7, lines 44-47).

Regarding claim 2, the first, second and third memory fields (AREA 1, AREA2, WORK 2) are all R/W enabled as evident from figure 3 and the flow charts of figures 4 and 5.

Regarding claim 3, if power is lost to the printer while writing to the third memory field (WORK 2) of the DRAM, information in the second memory field (AREA 2) of the EEPROM is not corrupted (column 8, lines 42-44).

Regarding claim 4, ink usage (discharge ink amount in a preliminary discharge) is part of the first high priority usage information that is copied to the second high priority usage information (column 6, line 43).

Regarding claim 6, information is stored in a ROM (column 5, lines 25-26).

Regarding claim 10, checksum bytes (TH1, TH2) are stored associated with the first and second memory fields (AREA 1, AREA 2) (column 5, line 63 – column 6, line 5).

Regarding claim 11, the checksum bytes (TH1, TH2) are dependent upon the low priority and first high priority usage information since they are the sum of the data stored in the memory addresses associated with this information (column 6, lines 2-5).

Regarding claim 12, the checksum bytes (TH1, TH2) are used to check the validity of low priority and first high priority information during power up as described in relation to figure 4.

Regarding claim 13, second high priority usage information of WORK 2 is substituted for first high priority usage information in AREA 2 if the first high priority usage information is corrupted as described in relation to S306-S307 of figure 5.

Okamoto discloses, regarding claim 16, an ink jet printer (figure 1), comprising a memory module (1702, 1703, 1708 as in figure 2) including:

a first field (AREA 1) containing low priority usage information (information not considered catastrophic if corrupted) (column 7, lines 4-25);

a second field (AREA 2) storing first high priority usage information (information considered catastrophic if corrupted) (column 6, lines 32-49); and

a third field (WORK 2) storing second high priority usage information, said second high priority usage information being substantially identical (a copy as taught by Okamoto) to said first high priority usage information (column 7, lines 44-47).

Regarding claim 17, a ROM is included in the memory module (column 5, lines 25-28).

Regarding claim 19, checksum bytes (TH1, TH2) are stored associated with the

first and second memory fields (AREA 1, AREA 2) (column 5, line 63 – column 6, line

5).

Regarding claim 20, the checksum bytes (TH1, TH2) are dependent upon the low

priority and first high priority usage information since they are the sum of the data stored

in the memory addresses associated with this information (column 6, lines 2-5).

Okamoto discloses, regarding claim 22, a method for storing usage information in

an ink jet printer (figure 1), said method comprising the steps of:

storing first usage information in a first memory field (AREA 2) (column 6, lines

32-49); and

storing second usage information in a second memory field (WORK 2), said

second usage information being substantially identical (a copy as taught by Okamoto) to

said first usage information (column 7, lines 44-47).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the

various claims was commonly owned at the time any inventions covered therein were

made absent any evidence to the contrary. Applicant is advised of the obligation under

37 CFR 1.56 to point out the inventor and invention dates of each claim that was not

commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

3.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto

US 6,002,846 in view of Harrington III et al. US 5,627,572.

        Okamoto discloses the limitations of claim 1 as described above.

        Okamato teaches storing recovery information associated with inkjet cleaning

included in the low priority usage information (column 7, lines 10-13).

        Okamoto fails to teach that the recovery information includes a number of wet-

wipes performed.

        Harrington, III et al. teaches storing a number and time of wipes as recovery

information to optimize inkjet print head maintenance (abstract).

        It would have been obvious to a person of ordinary skill in the art at the time of

the invention to additional recovery information include a number of wet-wipes

performed in the method of Okamoto as taught by Harrington, III et al.

        The motivation for doing so would have been to optimize inkjet printhead

maintenance as taught by the abstract of Harrington, III.

4.   Claims 7, 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Okamoto US 6,002,846 in view of Digital Design 2nd ed. by Mano Pgs. 180-186

and 299-302.

Okamoto discloses the limitations of claim 6 and 17 as described above.

Okamoto discloses the utility of checksum bytes (column 2, lines 11-27).

Okamoto fails to teach that the ROM information (column 5, lines 25-26) is

determined at a time of manufacture or associating a checksum byte with the ROM.

Mano teaches that ROMs are programmed during manufacture in accordance

with specifications in order to produce large quantities of ROM (pg.185) and that

checksum procedures are advantageous to all types of memory devices to avoid

memory errors (pg. 299-302).

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to determine the ROM information of Okamoto at the time of manufacture

and associate a checksum with the ROM.

The motivation for doing so would have been to facilitate mass production and to

avoid memory errors as taught by Mano.

5.   Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Okamoto US 6,002,846 in view of Cook WO 99/65695.

Okamoto discloses the limitations of claim 1 as described above.

Okamoto fails to teach a ROM with information determined at a time of

manufacture or storing information regarding starting ink.

Cook discloses a ROM of an inkjet printer with information determined at a time of manufacture and storing information regarding starting ink (page 8, lines 19-25).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to include a ROM in the printer of Okamoto and store starting ink information in the ROM during manufacture as taught by Cook.

The motivation for doing so would have been to solve the problem of ink incompatibility as taught by page 2, lines 4-5 of Cook.

6.   Claims 14, 15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto US 6,002,846 in view of Eby et al. US 5,146,431.

Okamoto discloses the limitations of claims 1 and 16 as described above.

Okamoto discloses, regarding claim 15, authenticating non-volatile EEPROM 1708, which stores the first and second memory fields (AREA 1, AREA 2), upon power up of the printer (figure 4).

Okamoto discloses, regarding claim 21, that the third memory field (WORK 2) is a DRAM memory (1703).

Okamoto is concerned with information loss due to power loss (column 6, lines 46-49).

Okamoto fails to disclose, regarding claim 14, that the first, second and third memory field are contained in a single non-volatile memory module.

Okamoto fails to disclose, regarding claim 21, that the third memory field is non-volatile (i.e. retaining information during power loss).

Eby et al. discloses that it was well established in the prior art that combining

DRAM and EEPROM memory features to produce a single NVDRAM (non-volatile

DRAM) memory module is useful in order to retain information during power loss

(column 1, lines 11-40).

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to use NVDRAM to achieve the functions of the DRAM and EEPROM as

disclosed by Okamoto.

The motivation for doing so would have been to prevent information from the

DRAM from being lost if power is interrupted as indicated by the background discussion

of Eby et al.

Additional Prior Art

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Richard Dorf, The Electrical Engineering Handbook 1997, pgs. 1805-1813

provides background information on inherent characteristics of some electronic memory

devices.

Contact Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Examiner Blaise Mouttet whose telephone number is

(703) 305-3007. The examiner can normally be reached on Monday-Friday from 8:30

a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Stephen Meier, Art Unit 2853, can be reached at (703) 308-4896. The fax

phone number for the organization where this application or proceeding is assigned is

(703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 308-

0956.

Blaise Mouttet October 8, 2003

Stephen D. Meier
Primary Examiner

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